

The Wellcome Laboratories of Tropical Medicine,  
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15th October 1952.

Dear Dr. Lederberg,

Thank you for your letter of September 27th. I have delayed replying until I had ready to send to you a complete set of the Salmonella typhi-murium cultures infected with different symbiotic bacteriophages. I am sending these under separate cover, together with a list which is, I think, self-explanatory.

Dr. Stocker came to visit me a short time ago and told me about your work and your reasons for being interested in S. typhi-murium. It was because of this conversation that I decided to send you a complete set of phage-bearing strains instead of the few which you mentioned. The only one which is not described in my original paper is S22, the strain which carries phage Type A4. This is obviously closely related to the other A types but has a distinct antigenic pattern. So far I have been unable to isolate lytic variants from it.

I will send you in a day or two the indicator for 1404. I am checking up on it at present and owing to a mischance the cultures are not ready to send. I have not yet tackled the question of the symbiotic phage present in 1411 but I have good reason to think that I shall be able to find a suitable indicator. You remark on the property which C20 has to attack S. paratyphi A, B and C. In fact this is rather a feeble action and I doubt if you will get much out of it.

I am afraid I have no experience with rough indicators worth mentioning. I have noticed, however, that strain C20 (Type B4) has a lytic action on the rough strain of S. paratyphi C. None of the other phages in this series acts in this way.

Dr. Stocker handed over to me strains IT2, IT7 and IT22. I have just started to examine these and will let you know my findings in due course.

Yours sincerely,

J. K. Boyd

Strains of salmonella typhi-murium.

Index Number.

Bacteriophage.

S.T.M. 1404/A1

Type A1

C68

Type A2

29929

Type A3

S22

Type A4

C26

Type B1

1404/B2

Type B2

C73

Type B3

C20

Type B4

C80

Type B5

Further members of both groups have been identified, but are still under investigation.

Indicator strains:- 1404

1411